Written Testimony of Brooks Hurst, Tarkio, MO, 3/4/2009

My name is Brooks Hurst I farm in northwest Missouri (Tarkio, MO). In addition to serving on the board of a majority farmer-owned biodiesel production facility located in Kansas City, Mo., I am also invested in several other new-generation cooperatives and limited liability companies. I was asked to testify about the impact the economic downturn has had on the biofuels industry.

Because I am more involved with the biodiesel industry than I am ethanol, I will focus on biodiesel. However, I do believe that I can accurately answer any questions the Small Business Committee might have about liquid biofuels and/or direct the members to helpful resources.

For clarification: biodiesel is made from vegetable oil and most of this oil comes from soybeans, although any fatty acid can be utilized. Biodiesel is blended with petroleum-based diesel fuel and can power any vehicle or piece of machinery that has a diesel engine. Ethanol is alcohol that is distilled from a sugar or starch-based mash. Corn is currently the most economically feasible feedstock for ethanol production. Ethanol is blended with gasoline for use in cars and light-duty trucks that have gasoline engines.

These two fuels represent real technology that we are able to produce now. Biofuels are reducing our dependence on foreign oil, adding to our fuel supply and creating jobs by encouraging the proliferation of "bio-refineries" in the rural areas of this nation. And the displacement of fossil fuels with these renewable fuels is good for our environment. For every unit of energy that is used for drilling, transporting and refining gasoline, only 0.9 of a unit is gained. With tillage, fertilizer, processing, etc., figured-in, ethanol yields 1.2 units of energy for every unit of input. Biodiesel's return on energy investment is even more impressive. From field to fuel tank, biodiesel gives 3.5 units for every unit of energy while reducing the carbon footprint for every gallon by 70 percent.

While I'm dispelling misinformation, I will also mention that there is no food vs. fuel issue when it comes to biodiesel. The following figures can also aid in demonstrating the impact that commodity prices have on the biodiesel industry.

Whole soybeans are rarely fed to animals or eaten by people. The beans are processed (crushed) to separate the oil (20 percent of the soybean itself), meal (75 percent), and hulls (5 percent). More than 95 percent of all domestically-produced soybean meal is fed to livestock, but it can also be made into soymilk, tofu, etc. The hulls are fed to animals and have the same market value as corn. Only the soybean oil is used to make biodiesel. In other words, for every unit of biodiesel produced, there are more than three times as many units of feed and/or food produced. What about cooking oil? Used cooking oil is also utilized to make biodiesel. So, foods can be fried in oil, and then the oil can be made into biodiesel. The more soybeans we grow for vegetable oil to be processed into biodiesel, the more feed and food is produced. The biodiesel industry provides food, feed, AND fuel.

Every 60-pound bushel of soybeans yields approximately 1.5 gallons of soybean oil which subsequently yields 1.5 gallons of biodiesel. The formula for biodiesel is simple: 90 percent fatty acid + 10 percent alcohol + catalyst = 90 percent biodiesel and 10 percent glycerin. I will expand on the role glycerin plays near the conclusion of this testimony. Soybean oil weighs approximately 7.5 pounds per gallon. If you multiply 7.5 by the Chicago Board of Trade price for soybean oil, which gives you a rough idea of the break-even price for biodiesel.

It is understandable that commodity prices, along with fuel prices, have the greatest impact on the feasibility of the biofuels industry. I don't know how direct the relationship is between the economy and fuel prices, but the dipping petroleum market has affected our bottom line as much as high feedstock prices did over the summer.

The situation in the world of finance has affected many biofuels operations also. At a time when a great deal of operating capital is/was required to pay for margin calls or to simply keep the operation afloat, lenders tightened the purse strings. Even though interest rates are low, financial institutions are not willing to loan the money. I know of an example where a loan on a biodiesel plant was purchased by a large firm who put a stop to the farmer-owned plant borrowing money from a local bank. However, the new financer would not extend operating capital to the plant. The biodiesel cooperative is now trying to squeeze more money from its original investors. They have no other option!

I also know of a large scale, farmer-owned biodiesel production facility for which 40 percent of the capital requirement for construction was met by farmer-investors. Three years ago, when the shares were sold to farmers, diesel prices at the pump were around $3 per gallon and soybean oil prices were around $0.28 per pound. With the Dollar Blenders Credit from the Federal Government, the future looked bright for biodiesel investors and financers were knocking on doors wanting the business of these co-ops and LLCs. We all knew things would tighten-up, but we didn't know how dramatically. This particular group had three different lenders willing to put up 60 percent of the capital. Their equity drive closed and construction started at about the same time that commodity prices began to climb. Those lenders all raised their required interest rates which prolonged negotiations and before an agreement was reached with one of the firms. Soybean oil prices were over $0.70 per pound and projected margins were thin. New lenders were courted, but then the financial world collapsed. The plant is now partially built, but the capital raised has been depleted and the construction crews have been sent home until further capital is raised or a lender steps forward.

I have been fortunate to be involved in business models with a better position in the industry. But, things are still tough. Nationally, biodiesel's production capacity is near 2.55 billion gallons per year; however, actual production was approximately 700 million gallons in 2008. Still, biodiesel was able to displace more than 20 million barrels of petroleum in 2008. These numbers help to show that there is great potential to increase the level of U.S. biodiesel production and reduce dependency on foreign oil when

operating capital is available and/or the markets are not as volatile as they are today. For ethanol, approximately 9.5 billion gallons were produced in 2008, which displaced more than 300 million gallons of foreign oil.

One 30-40 million gallon biodiesel plant that is integrated with a soybean crush facility will employ over 50 individuals with a payroll of over $2 million annually. The construction of that plant provided jobs and transportation jobs have been created as a result of the transfer of goods in and out. The demand for soybeans is higher and the feed for animals is cheaper because the plant was built. Those additional profits combined with the earnings from the farmer-owned facility are reinvested in rural communities, creating retail and service jobs. That exemplifies why it is critical to keep the biofuels ball rolling.

I suppose the government has done everything possible to encourage lenders to extend operating capital to existing biodiesel and ethanol production facilities. If not, those avenues need to be explored to maintain the industry we have created and which has truly had a positive impact on Rural America and our nation as a whole. There is no need to throw money at "pie-in-the-sky programs" when we have part of the answer to our future energy needs at hand.

Aside from the requirements for capital and financing, three recommendations for the committee and the federal government come to mind: extension of the federal Biodiesel Blender's Credit, inclusion of glycerin in the federal Bio-based Fuel Blender's Credit and implementation of the Renewable Fuels Standard. I believe that biofuels producers who make it through this volatile shake-out period will be successful long term. Extending and properly implementing the programs already in place can aid this fledgling industry.

One of the biodiesel plants I am involved in is finding it difficult to book business forward because of the uncertainty of the continuance of the Biodiesel Blender's Credit program. If extended for three more years, operations could minimize their risks by contracting forward. It would also assure lenders that projections relying on the credit were accurate and that possible market implications were not a nearby concern.

Likewise, if the Department of Revenue would decide that glycerin is eligible for the fifty-cent Bio-based Fuel Blending Credit, it would establish a floor for the price of the co-product coming out of biodiesel plants. There are many uses for glycerin, but its pricing has fluctuated as greatly as the petroleum and commodity markets. Glycerin is being successfully utilized as a fuel conditioner in #4 fuel oil. It works as a fuel when blended at 20 percent in burners that fire asphalt plants. It is bio-based and there is no reason why it should not be eligible for that tax credit program. Inclusion in the tax credit program would also help the Environmental Protection Agency move their classification of glycerin from a waste product to a fuel.

Finally, implementing the Renewable Fuel Standard that Congress passed in the latest Energy Bill would help to provide additional support for the nation's biofuels producers. The specifics for the enforcement of the RFS are still to be determined, but we need it to

be enacted as soon as possible. Even when biofuels have been less expensive than petroleum based fuels, we have seen petroleum companies resist making biodiesel or ethanol available to consumers. The RFS is necessary to help the free market because petroleum companies have a monopoly on the distribution infrastructure.

Making biofuels available to the public and increasing domestic demand is more important than ever. All exports of biodiesel to Europe have been stopped as of the first of the year pending determinations on trade conflicts between U.S. biodiesel producers and the European Union.

I believe that we, as a nation, stand at a crossroads. The decisions that are made today will impact this country for years to come. It is my hope that my testimony will help demonstrate the importance of the biofuels industry and that the Small Business Committee will consider my recommendations. It is crucial that we work together to ensure that the U.S. biofuels industry continues to play an important role in rural development and growing our fuel supply.